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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/031,372	01/18/2002	Koji Kaneko	217955US2PCT	2520
22850	7590	05/03/2005	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			GHULAMALI, QUTBUDDIN	
			ART UNIT	PAPER NUMBER
			2637	

DATE MAILED: 05/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/031,372	Applicant(s) KANEKO ET AL.	
	Examiner Qutub Ghulamali	Art Unit 2637	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>12/17/04, 1/18/02</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

2. Claims 2 and 11 recites the limitation "the like chip interval" in line 6. There is insufficient antecedent basis for this limitation in the claim.
3. Claim 15 recites the limitation "the plural sets of processes" in lines 3-4. There is insufficient antecedent basis for this limitation in the claims.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 2, 6, 7, 10, 11 and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Saito et al (US Patent 5,940,432).

With reference to claims 1 and 10, Saito discloses a spread spectrum communication receiver comprising:

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control unit which outputs control information necessary for generating processing of despreding codes, and address information and timing information necessary for reading-out processing of despreding codes (col. 2, lines 33-39);

a despreding-code generating unit which continuously generates despreding-codes, based the control information 40-60);

a code storage unit which stores the despreding codes for each address corresponding to delay time of multi-paths (col. 2, lines 33-39);

plurality of code reading-out units each of which receives the despreding codes, which have been read out based on the address information, corresponding to each path, and outputs received despreding-codes based on the timing information (col. 3, lines 28-40);

a plurality of demodulating each of which separately demodulates the received signals, using the despreding codes corresponding to each path (col. 2, lines 23-33); and

a combining unit (4) which combines all the demodulated signals (col. 5, lines 46-55; col. 6, lines 1-3).

Regarding claims 2 and 11, Saito discloses code storage unit performs writing-in and read-out of codes accumulated in the storage for the like chip interval (abstract; col. 2, lines 23-33).

Regarding claims 5 and 14, Saito discloses the code storage unit further has a configuration where conversion from serial data of one bit to parallel data of plural bits is performed at writing-in operation the despreding codes; converted parallel data simultaneously written in; conversion from parallel data of plural bits, which have been simultaneously read out, to serial data of one bit is performed at subsequent reading-out

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operation; and the converted serial data output to the code reading-out section one by one (col. 3, lines 18-42).

Regarding claims 6, 7 and 15, Saito discloses a plurality of combinations of the code storage unit (314, 324, 334), the code reading-out unit, and the demodulating unit (31, 32, 33) (col. 5, lines 47-56); and a selection unit which selects any one of the plurality of code storage units, wherein the despreding codes are stored in the code storage unit selected by the selection unit (col. 9, lines 50-57; col. 10, lines 1-4).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3, 4, 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito et al (US Patent 5,940,432) in view of Yokota (US Patent 6,775,317).

Regarding claims 3 and 12, Saito discloses every feature of the claimed invention. Saito though discloses despreding code generating unit outputs despreding codes for one period based on control signal (col. 3, lines 3-10, 18-24; col. 7, lines 7-25) but is silent regarding stop or termination of operation thereafter. Yokota in the same field of endeavor discloses (abstract) despreding code generating unit outputs despreding codes for one period based on control signal and thereafter stops or terminate the operation (col. 5, lines 6-27). It would have been

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obvious to a person of ordinary skill in the art at the time the invention was made to use the stop or terminate operation with the despreading of codes as taught by Yokota in the circuit of Saito because it can drastically reduce power consumption in the wait time or period and reduce and enhance long use of the battery in small size.

Regarding claims 4 and 13, Saito discloses every feature of the claimed invention but is silent on outputs new despreading codes for one period (time) based on the control signal changes in the despreading codes and thereafter stops (terminate) the operation. Yokota in the same field of endeavor discloses outputs new despreading codes (transmits free line signal) for one period (time) based on the control signal changes in the despreading codes and thereafter stops (terminate) the operation (col. 5, lines 28-48). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use new spreading codes changes and thereafter stop or terminate operation with the despreading of codes as taught by Yokota in the circuit of Saito so as to enhance and speed up the reception of signals during the transmission time.

8. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito et al (US Patent 5,940,432) in view of Araki (US Patent 5,887,028).

Regarding claims 8 and 9, Saito discloses all claimed limitations to claim 1 but is silent regarding the despreading-code generating unit generates M sequence codes by calculating an exclusive-OR of arbitrary bit outputs in a shift register of each despreading code generating unit. Araki in a similar field of endeavor discloses despreading-code generating unit generates M sequence codes by calculating an exclusive-OR of arbitrary bit outputs in a shift register of each despreading code generating unit (col. 2, lines 12-32; col. 17, lines 1-40). It would have been

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obvious to a person of ordinary skill in the art at the time the invention was made to use exclusive OR operation as taught by Yokota in the circuit of Saito so as to result in combination and arbitrary generation of PN codes.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patents:

Izumi et al (US Patent 5,467,367) discloses a spread spectrum communication apparatus inversely spread code is demodulated.

Suzuki et al (US Patent 5,907,585) shows a digital signal detection method for received signal and symbol transmission rate.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Qutub Ghulamali whose telephone number is (571) 272-3014.

The examiner can normally be reached on Monday-Friday from 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



QG.
April 28, 2005.



JAY K. PATEL
SUPERVISORY PATENT EXAMINER